

ABSTRACT

A distributed quality-of-service system makes use of a distributed architecture to achieve very high throughput and availability in which a number of separate processors are loosely coupled in a scalable communication architecture. The computational load required to implement an approach that is similar to that of Floyd and Jacobson is distributed among the processors without requiring the processors to be tightly coupled. A high data rate flow is split so that each processor receives a portion of the traffic passing through the system. The processors implement separate class-based queuing and link fairness algorithms. The output flows of each of the processors are combined to form the overall output flow. The processors exchange data from time to time in order to achieve an approximate link fairness on the overall output flow without requiring the separate algorithms implemented on each of the processors to be tightly coupled.

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